

[0052] As shown, and as noted and explained above, the system 10 herein, employs a computer controller 12 having a microprocessor and having available electronic memory operatively engaged or in communication therewith, in which software operating to accomplish the various tasks noted herein is running.

[0053] In all modes of the system 10, the controller 12 will be in electronic communication with an ignition sensor 14 which operates to communicate an electronic signal to the controller 12 when a driver of the vehicle has actuated a switch or key to a start position for the engine of the vehicle. Engine operation sensing software running on the controller 12, upon receipt of an electronic ignition signal from the ignition sensor 14, will generate a signal to the controller to cause a sonic alarm 16 such as a horn or transducer or loudspeaker, to generate a startup sonic warning sound to areas surrounding the vehicle, which correlates to the action of starting the vehicle.

[0054] In all modes of the system 10 herein when it is noted that the controller 12 activates a component, such may be by direct electric communication with that component or by activation of a remote switch such as a solenoid or electronically activated switch, or by communication of a signal directly to a component which has a unique identifier such as a MAC ID on a network, to activate or deactivate its respective function. Such communication between the components communicating with the controller may be by wired or fiberoptic cabling or by wireless communication. Further, while not shown, all components requiring electric power will be operatively engaged to onboard electric power of the vehicle in a conventional fashion using wires and where being remotely controlled appropriate switching controlled by the controller 12 to turn them on or off.

[0055] Where a sound is generated herein, the number and length of such sonic signals may vary with industries and companies. As described herein, a startup sonic warning is provided by a single honk or other single sound emission from a sonic alarm 16, such as a speaker or transducer. Such is generated as a vehicle startup warning sound, upon a vehicle startup, for surrounding workers to hear. Such a startup sonic warning may vary in the number of sounds or honks emitted in various industries and job sites and the system 10 herein can be adjusted for such.

[0056] Concurrent with actuating the sonic alarm 16 to generate a honk or other audible signal as a vehicle startup sonic warning or sound correlating to an engine start, the controller 12 will also actuate a light-emitting alarm 18, such as LEDs or strobe lights, which are positioned on at least the front and rear of the vehicle to emit a number of flashes of light equal to the number of honks or sounds generated by the speaker for the startup sonic warning, such as to flash once. This concurrent startup sonic warning and startup warning light, so emitted in equal numbers, provides humans proximate to the vehicle both visual and audible warnings that the vehicle engine is started and running.

[0057] With the engine running, the controller 12 is in ongoing electronic communication with a vehicle direction sensor 20 such as one engaged with the transmission selector employed by drivers to engage the vehicle with the engine to move in a particular direction. This vehicle direction sensor 20 will communicate electronic signals to the controller 12, which correlate to a current vehicle movement direction selection by the driver, such as primarily forward or reverse.

[0058] When the vehicle direction sensor 20 communicates a signal to the controller 12 that a forward driving direction has been selected, the directional software running on the controller 12 to the task of receiving a signal from the direction sensor 20 and determining the upcoming directional movement of the vehicle, will cause the controller 12 to initiate a visual and an audible warning correlating to the direction of vehicle movement. For example, the directional software, once it determines forward vehicle movement, will signal and cause the controller 12 to actuate the sonic alarm 16 or horn to honk or emit sounds twice as a forward movement sonic warning. Preferably the controller 12 will also concurrently actuate the light-emitting alarm 18, such as LED's or strobe lights, to flash the same number of times as the number of sounds emitted by the sonic alarm 16 which in forward movement is twice. Such will provide a concurrent forward direction warning light to be emitted and seen by surrounding workers.

[0059] As noted, increased risks to the humans proximate to the vehicle are present when the driver chooses to move in a reverse direction. Upon receipt of an electronic signal by the controller 12 from the direction sensor 20 that the driver actuated a selector to cause the vehicle to move in reverse, the directional software running on the controller 12 will actuate the controller to initiate a different sonic and visual signal pattern. For example, the directional software upon determining reverse vehicle movement, will cause the controller 12 to actuate the sonic alarm 16 to honk or emit other sounds three times as a reverse movement sonic warning.

[0060] Concurrently, with the actuation of the sonic alarm 16 to emit a reverse movement sonic warning, the controller upon communication of reverse movement being determined by the directional software will actuate rear-facing light-emitting alarms 18 to flash three times simultaneously with the sounds from the sound emitter 16. The flashes of light from the light emitting alarms 18 in the same number of flashes or emissions as the number of sounds or honks of the reverse movement sonic warning, will provide the surrounding workers with a rearward direction warning light and a visual cue that the vehicle is moving rearward.

[0061] Additionally and preferred, for the duration of time that the vehicle remains moving in the reverse direction, the controller 12 will continue to actuate the sonic alarm 16 to emit three sounds in short durations for the reverse movement sonic warning, and at least the rear facing light-emitting alarms 18 such as LED's or strobe lights to blink rearward direction warning light emissions at for the same number of times. This will result in a continuous sonic and visual warning, to surrounding workers, that the vehicle continuous reverse movement. For example, the concurrent sonic alarms 16 and light-emitting alarms 18 from strobe lights will both activate every five seconds until a transmission selector direction sensor 20 communicates to the directional software running on the controller 12, that the vehicle is shifted out of reverse.

[0062] Additionally, the system 10 may be enabled to communicate visually and audibly to workers and pedestrians proximate to the vehicle that an emergency exists. Such may be an emergency button 22 or switch which the driver manually activates which communicates to the controller 12 that an emergency exists. Upon receipt of such an emergency signal from the button 22, emergency sensing software running on the controller 12 running to the task, will cause an emergency sonic and light emission signaling to be